

Quantifying Weather and Climate Impacts on Health in Developing Countries (QWeCI)



A Seventh Framework Programme Collaborative Project (SICA)

13 partners from 9 countries

www.liv.ac.uk/QWeCI

Grant agreement 243964

Progress on interannual-to-decadal predictability over West African Monsoon

J. García-Serrano and F.J. Doblas-Reyes
Climate Forecasting Unit (CFU),
IC3, Barcelona, Spain

jgarcia@ic3.cat, f.doblas-reyes@ic3.cat

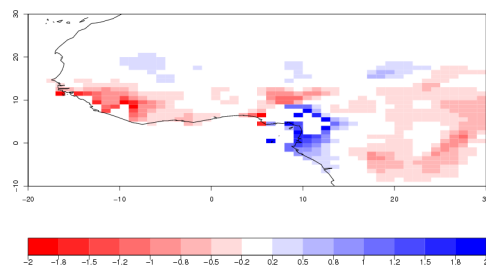


Introduction

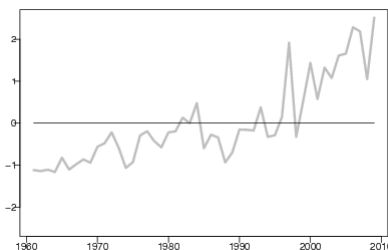
Introduction:

- Evaluate the leading precipitation modes (JAS seasonal-mean) from ENSEMBLES decadal hindcasts. Comparison with GPCC observational dataset. Period of study 1961-2009.

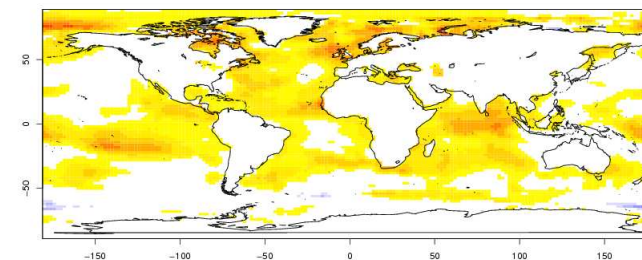
EOF1 fvar=25.5%



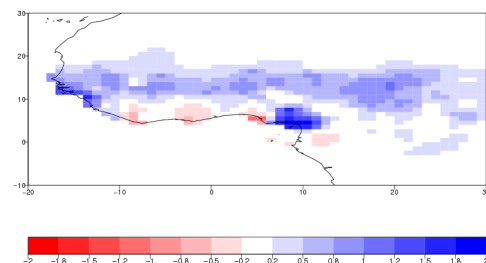
PC1



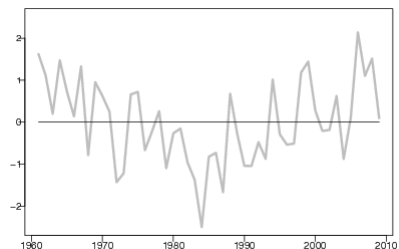
corr PC1 - ERSST



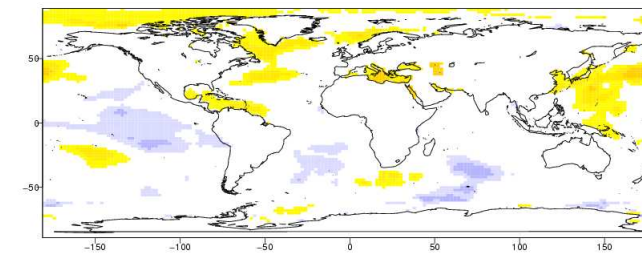
EOF2 fvar=11.9%



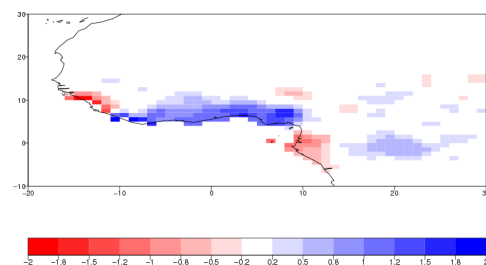
PC2



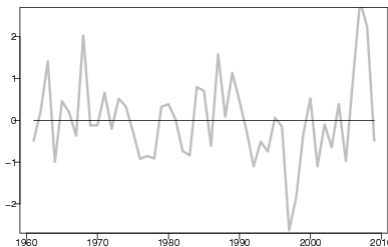
corr PC2 - ERSST



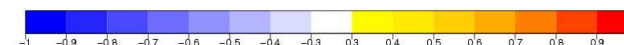
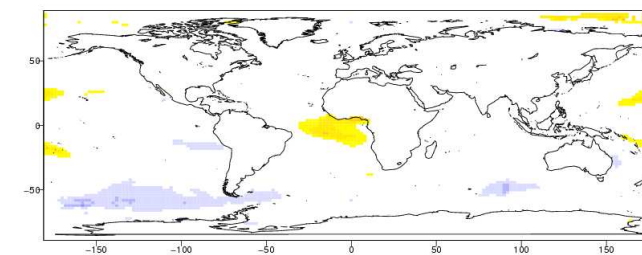
EOF3 fvar=10.4%



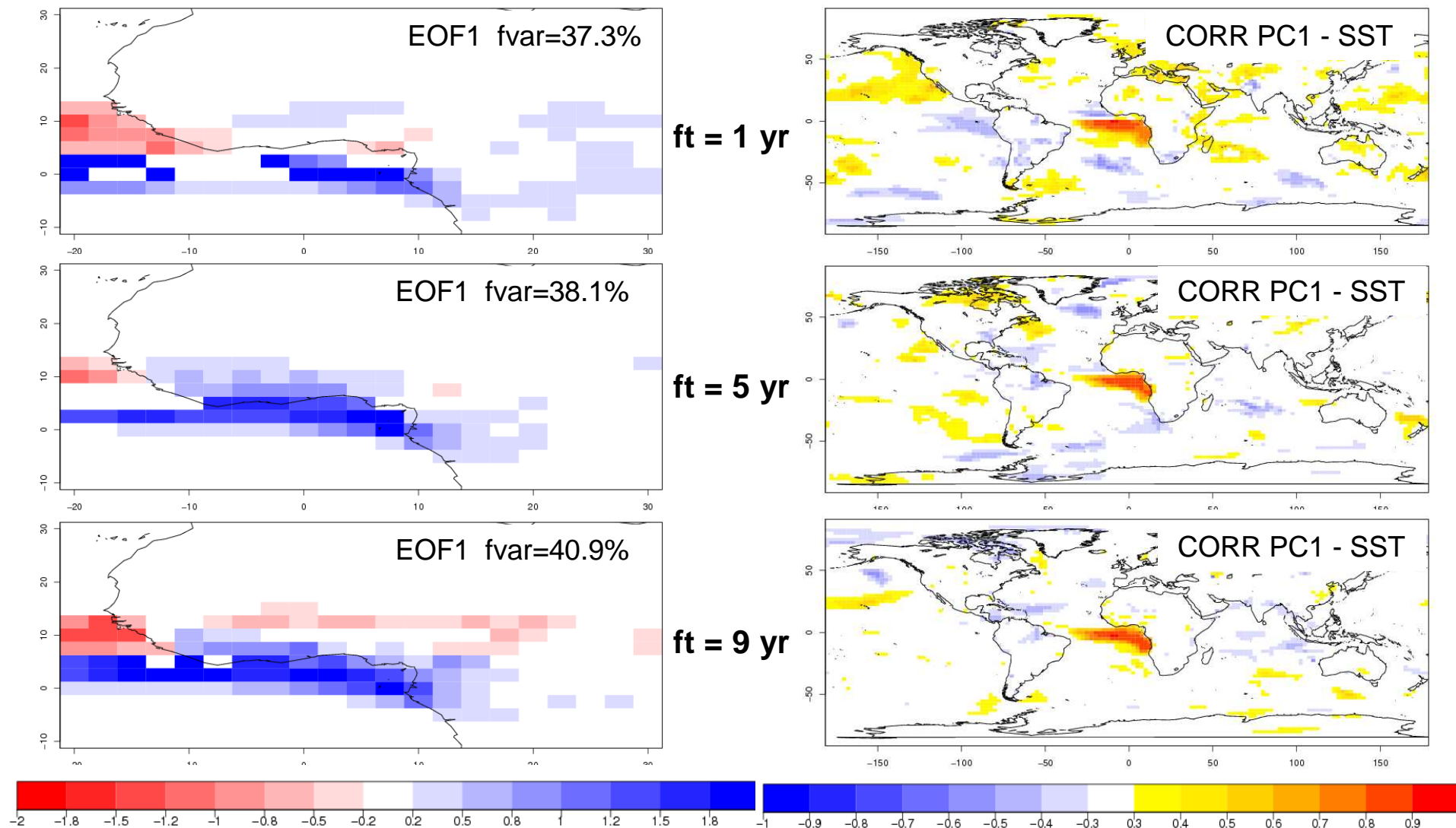
PC3



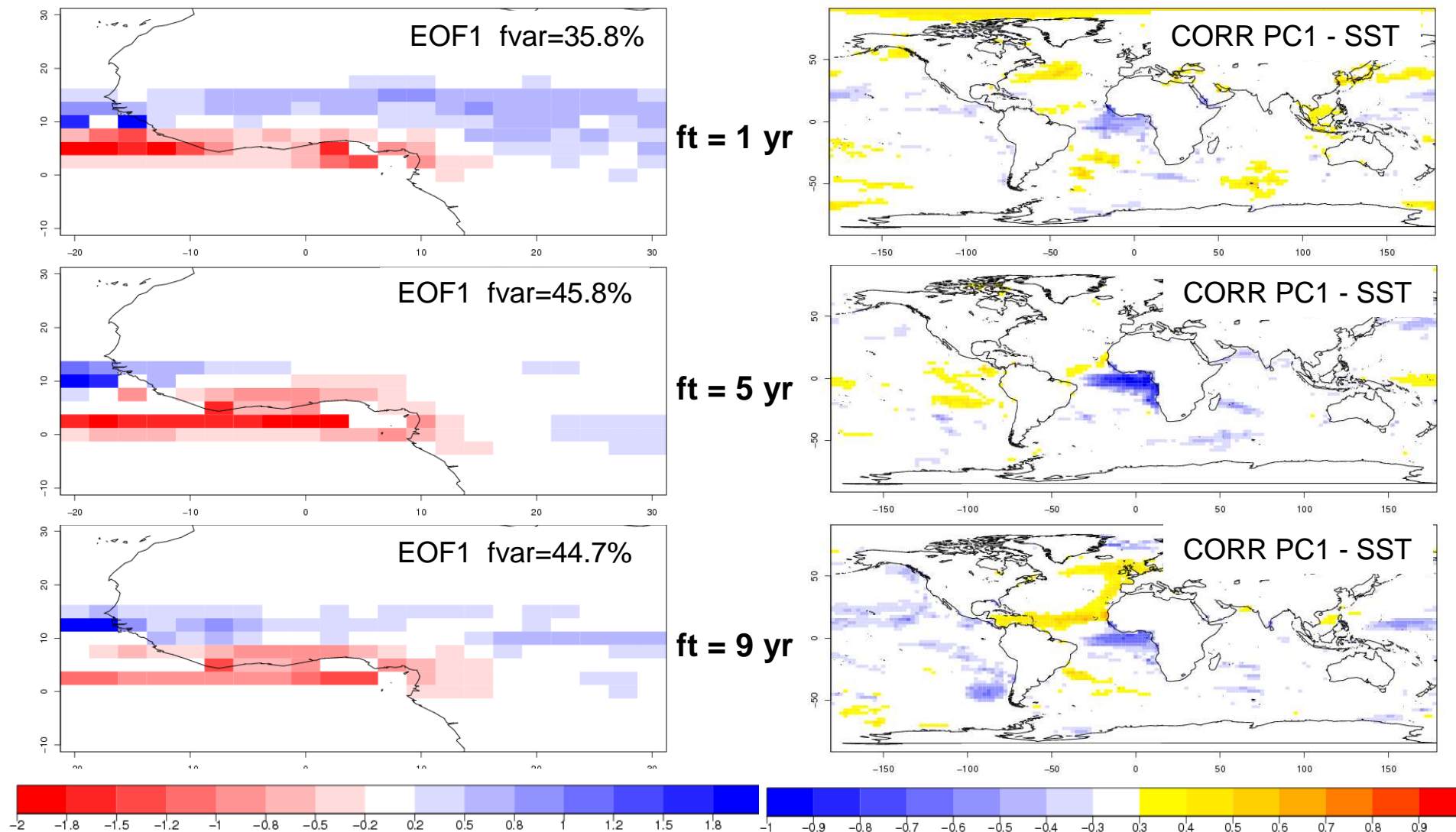
corr PC3 - ERSST



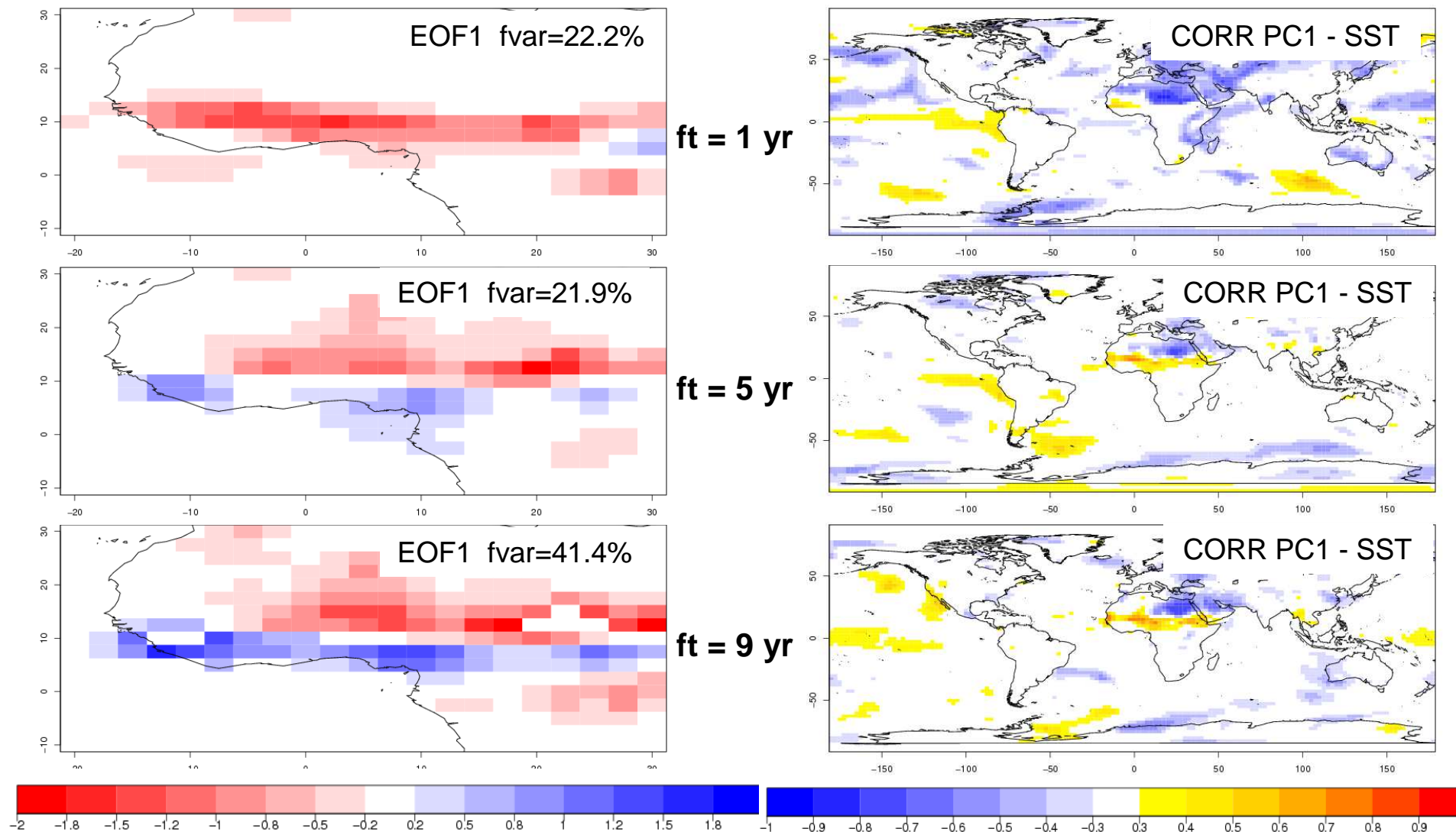
EOFs over WAM / ECMWF



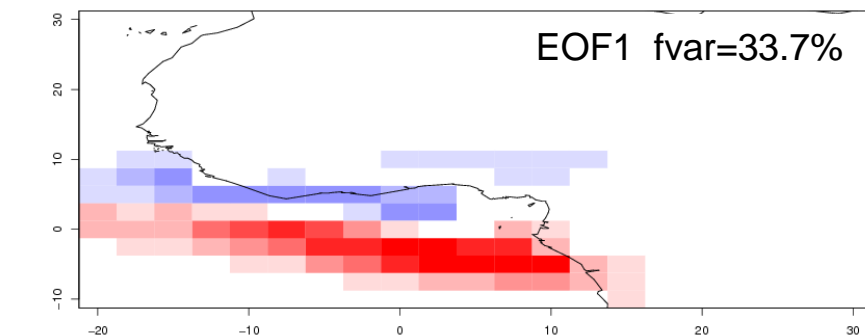
EOFs over WAM / UKMO



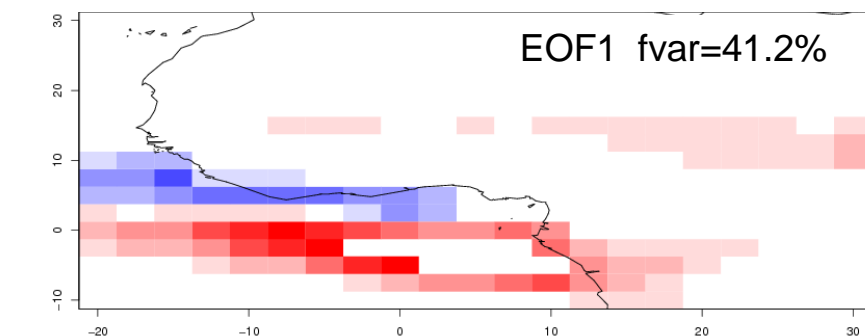
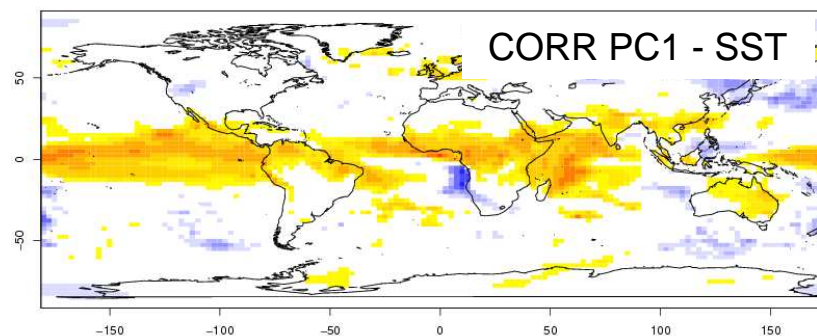
EOFs over WAM / CERFACS



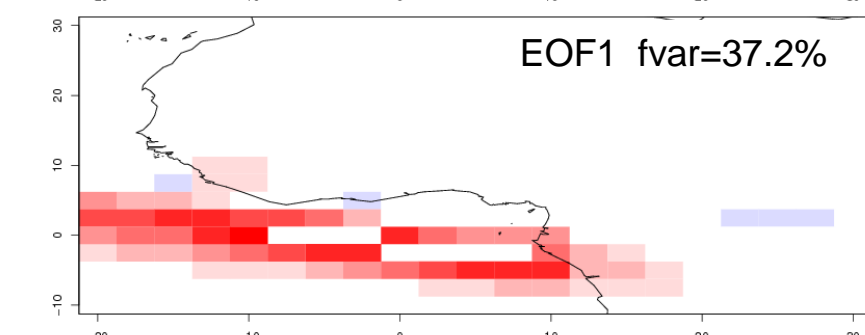
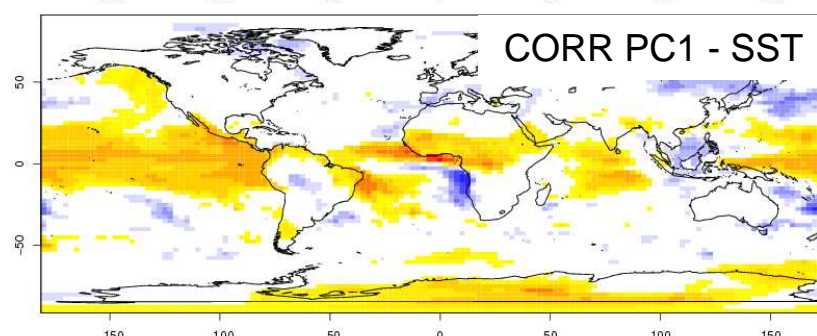
EOFs over WAM / IFM-GEOMAR



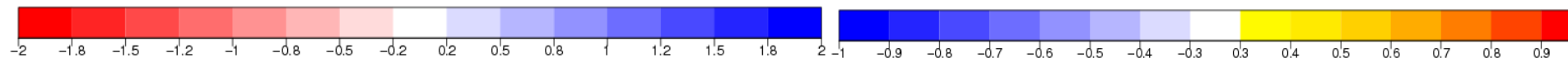
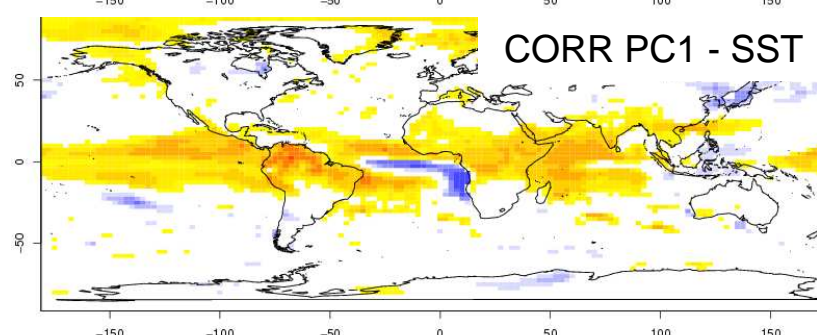
ft = 1 yr



ft = 5 yr



ft = 9 yr



Summary

- Distinct representations of WAM upon different ENSEMBLES models
- Atlantic Niño is the main driving-SST pattern in 2 (ECMWF, UKMO) out of four systems.
- CERFACS leading EOF appears to be associated with extratropical forcing (Mediterranean basin), maybe related to AMO
- IFM-GEOMAR leading EOF comprises a SST-pattern over the whole tropical band, with increasing amplitude of the Atlantic Niño
- None of the leading EOFs is significantly associated with the observed global-warming
- An overall increase in the explained fraction of variance is noted along the forecast time



Introduction, Key Results, Summary

Additional slides

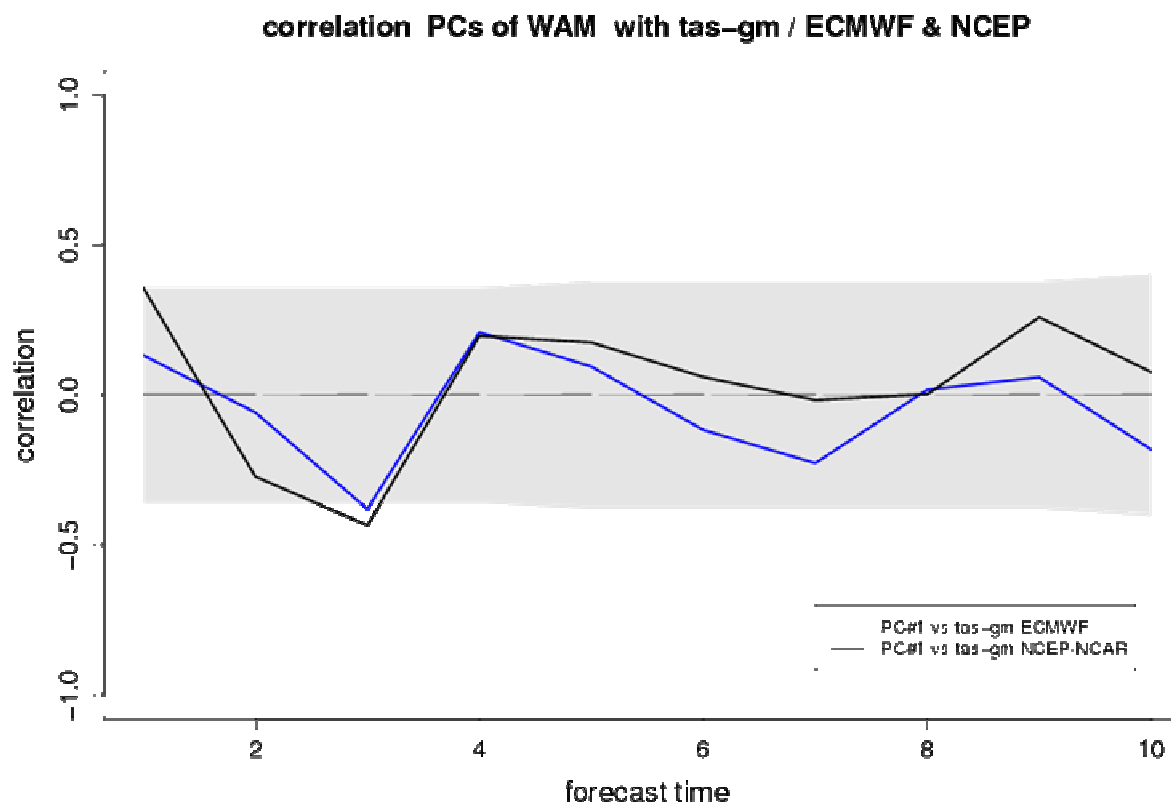


INSTITUT CATALÀ DE CIÈNCIES DEL CLIMA

QWeCI First Annual Meeting, Dakar, January 2011

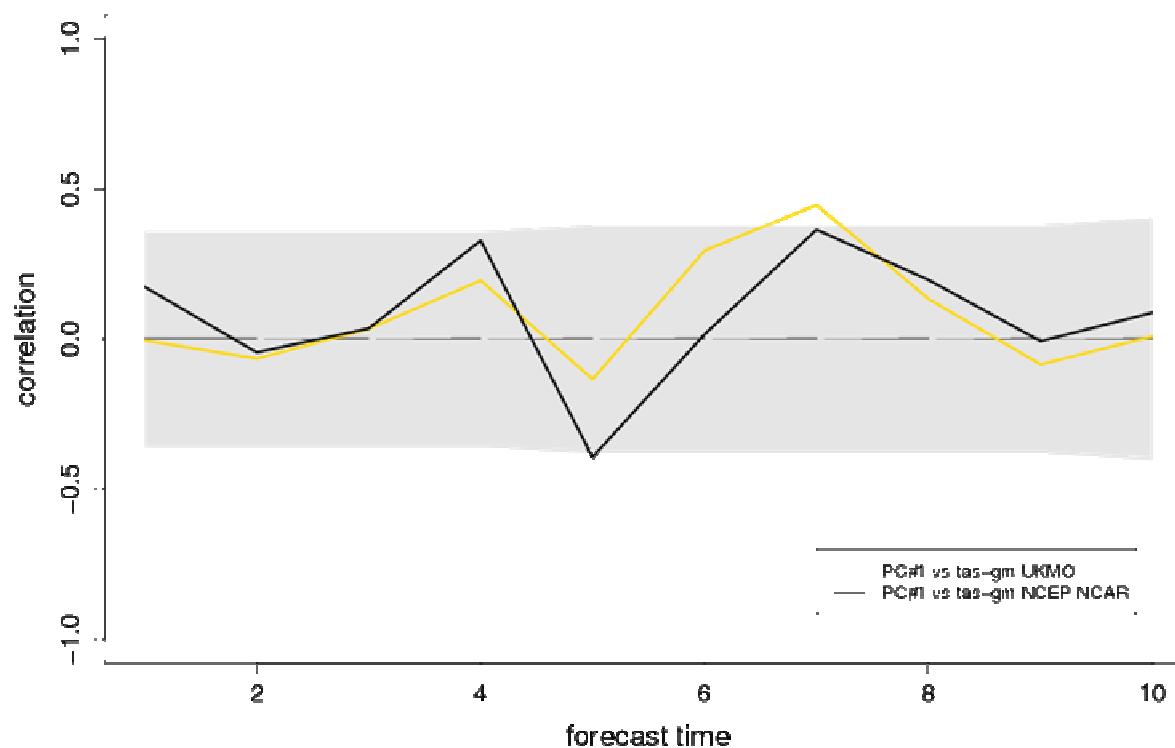


EOFs over WAM / ECMWF

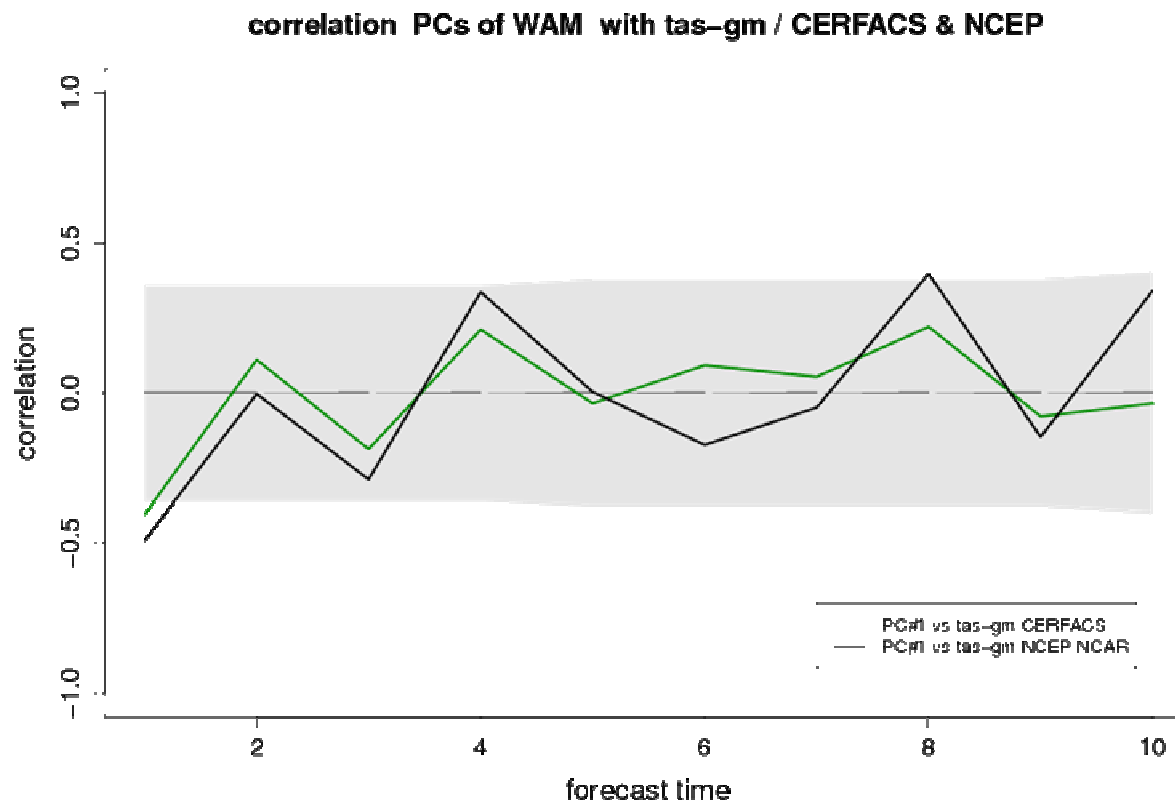


EOFs over WAM / UKMO

correlation PCs of WAM with tas-gm / UKMO & NCEP



EOFs over WAM / CERFACS



EOFs over WAM / IFM-GEOMAR

